Workplace Design & Technology Integration

Abstract

Technology is a resource, knowledge is the primary source of competitive advantage so that knowledge workers drive business success. This paper indicates how the technology development affects the nature of work and the impact for workplace design to cater people-centric and facilitate knowledge sharing, teamwork and innovation.

How Technology affects the Nature of Work

According to Ware and Grantham (2003) reported that how business transactions and interactions are conducted and managed are all shifting and at an accelerating pace. Also the changing nature of workplace, new workplace designs, new technology capabilities and the economics of supporting and leveraging knowledge workers are discussed. Knowledge is the primary source of competitive advantage and knowledge workers drive business success. Therefore, the new ideas of creative, integrated management of knowledge workers, the places where they work and the technology tools and infrastructures they reply on reducing workforce support costs by as much as 30 per cent while substantially improving worker productivity, effectiveness and satisfaction.

The trend of changing nature of work and workplace include globalization, technology advances, creativity and innovation, sustainability, knowledge and change management. The implications of technology trends affect the changes in the work environment but not all technology is appropriate. Facilities Management (FM) has to choose the most appropriate technology to apply for the users expectations.

According to McGregor and Then (1999), IT advances are allowing organizations to compete by virtualizing the nature of their businesses. Many businesses will develop as virtual organizations in whole or in part, with their workforce linked to them by means of electronic "umbilical cords". There are three developments:

1. Work is becoming abstract and information intensive.
2. Team are created and dismantled frequently, in response to varying business needs
3. The place of business is in electronic media, not a physical location. Flexible/mobile working and globalization is increasing.

In the past decade the workstations design connected and used Local Area Network (LAN). The emergence of the Internet and its associated tools and solutions has become one of the standard communication mediums of business worldwide. Interconnecting the company into global information and product markets through Web-based e-Business and the business will play in the Net economy. The FM dot com industry has been designing, building and providing these types of Web-based tools over the past 4 years and nearly 100 companies that have entered or announced plans to enter the eBusiness service provider market for FM (Paul Doherty 2002). The virtual procurement channels employ a self-service business model and enable the delivery of dynamic content, applications, project information, project management and decision support information at the point of purchase. The entire Internet Procurement system relies on the effective management and useful presentation of supplier product and pricing information in a virtual catalogue (or environment) that can be searched and queried by a requestor. This model is called the content/transaction hub model.

How Workplace Design to facilitate knowledge sharing, teamwork and innovation

In Ware and Grantham (2003) stated that successful organizations focus on minimizing workforce support costs such as technology, facilities, compensation and benefits, travel, development and management. Simultaneously, their critical workers have access to the information and communications capabilities they need to be highly efficient at all times and in all locations. Workplace design

should suit for the user requirement and to cater people-centric, facilitate knowledge sharing, teamwork and innovation.

According to Marmot (2005) that the workplace is subject to continual changes imposed by the external pressure from social, demographic and legislative change in an increasingly regulated and global world. Four aspects of change:

1. Demographic forecasts the population of the future ageing world with fewer younger employees, to prioritize the importance in the specification of the future workplace, design the required specification and design of the workplace with the future changing population such as lighting, workstation, ergonomics and special needs.

2. Environmental sustainability regarding environmental concerns and energy saving issues such as reducing of white noise, improvement of lighting and indoor air quality, using new technology for upgrading the IT infrastructure. The workplace design should adapt the new technology and methodology for matching with the changing nature of work, for example, new ceiling system, new lighting system, materials, construction and recycling methods.

3. Health regarding the health and safety issues for workplace design such as stress reduction, aging and infectious diseases precautions and also to integrate into the design manual and policy.

4. Globalization that leads the growth of international business standards, workplace design strategies on local and global standards. Also the workplace design should compile with the new and local legislation standards and how to extend the knowledge base for people working internationally.

The workplace innovations include rebuilding a cellular office environment to open plan or combination, flexi working or shared workspaces, ergonomically design furniture, Advanced Information and Communication (ICT), different filing systems (digital and central) and distance working. The benefits of innovation will be space savings, flexible, more creative and dynamic, higher work satisfaction/productivity, reduced number of sites, higher quality layout and design, better communication, better service to clients and

retention of staff. The potential cost of innovation include structural rebuilding or alternation costs such as flexible walls, floors, furniture, increasing ICT costs, equipment costs, organizational disruption, more management control is required, additional cleaning costs, maintenance costs, security costs.

In addition, the investment of technology should also consider the cost of technology, the benefits to be provided or potentially offers by technology to the FM and the effect on the workplace. For FM, the aim is to control the use of technology as a resource. Nowadays contemporary facility management demands the effective use of all business resources to achieve beneficial outcomes for key stakeholders. The trend of FM technology is more emphasis on people-centric collaboration. Organizations implementation has been limited by technological and business barrier and they eager to have an innovation way to achieve its true value-add from the cumulative value of internal and external users working in an integrated and collaborative fashion. The interactions between a multiplicity of users, accessing applications and data can significantly enhance the value of internal and external business processes technology.

In Wheeler (2005) article stated that the role of technology in driving change. Technology acts to transform the workplace in changing the way we work and the work we do as digital revolutions in ICT. The change in the work we do is best observed through the emergence of the knowledge economy. The role of ICT and of Human Resource Management provide corporations an opportunity of increasing the productivity of their most valuable workers/staff. The trend of demand of office space is paperless office, reducing storage space and reducing space requirement. Moreover, the improvement of ICT emerges to define work locations as satellite office to facilitate shorter commuting times and independent access to corporate information and resources that can be communicated virtually or interaction is vital. Co-location of workers in a single physical space provides workers with an environment rich with explicit and implicit communication. ICT tools provide elements to distributed workers and that can be used for teamwork, knowledge sharing and project basis work.

Conclusion

The technology development can improve organization's business internal and external processes. Mobile work pattern always relies on the technology and so to facilitate sharing the information and direct contact to the people by email or video conference at anytime anywhere, and to match the pace of globalization. The technology of workplace design can improve the working environment and focus on people-centric issue. Many organizations encourage interaction, teamwork and knowledge sharing and to incorporate with the web base system for effective communication.

Reference

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